

RE
51
M16

The CONSERVATION
of VISION



RE
51
M16

Cornell University Library

BOUGHT WITH THE INCOME OF THE

SAGE ENDOWMENT FUND

THE GIFT OF

Henry W. Sage

1891

A.368446

22 / III / 17

9306

Cornell University Library
RE 51.M16

The conservation of vision; an essay on t



3 1924 012 169 391

olin



Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

THE CONSERVATION OF VISION

AN ESSAY ON THE CARE OF THE EYES

EYE-STRAIN
EYE DISEASES
ILLUMINATION
IMPROVEMENT



DOUGLAS C. MCMURTRIE

NEW YORK CITY, 1911

WW

RE

51

M16

A.368446

The Conservation of Vision.

Do you realize that good eyesight is practically as important as physical health? Certainly both the power to learn and the power to earn depend almost entirely upon the possession of good eyes. But do you know how to safeguard and preserve your eyesight? If you are like most people, you have probably absorbed considerable knowledge of the general laws of health, while remaining practically ignorant of the simplest rules for conserving your own eyesight, as well as that of individuals placed in your care.

Without doubt the most widely spread of all disorders of the eye is eye-strain. It is likely that the effects of this form of eye trouble are greater and more disastrous than all other forms put together.

There may be some who are not clear as to what eye-strain is. For

The Conservation of Vision.

our present purposes it is sufficient to say that eye-strain is simply strain of the eye muscles, either those that are upon the outside of the eyeball and that move it around in its socket, or those inside the eyeball that help the eye to focus clearly. The strain of these two sets of muscles is called either external or internal eye-strain, as the case may be.

Internal eye-strain is caused by the eyeball being the wrong shape, which may be a misfortune of birth, a result of abuse of the eyes, or due to natural changes in later life. For instance, the eyeball may be too short, causing far-sight, or it may be too long, in which case there is near-sight. Or, again, it may be more curved in one direction than it is in the opposite direction, when the vision is called "astigmatic." Near-sight, far-sight, and astigmatic sight, if un-

The Conservation of Vision.

corrected, are bound to cause eye-strain.

The effects of eye-strain upon the general health is a matter of the greatest importance, and yet is very little understood by the general public. For eye-strain can do much more than cause injury and pain in the eyes themselves. Indeed, in most cases of eye-strain the eyes go on doing their work without apparent protest. They are willing servants. But in order to do this they make heavy draughts upon the nervous system, and in so doing naturally interfere with the proper functioning of other organs of the body.

Thus eye-strain may cause headache, indigestion, vomiting, nervousness, St. Vitus' dance, general fatigue, weakening and fickleness of will-power, sleeplessness, or over-sleepiness.

In short, eye-strain is one of the most powerful and cunning en-

The Conservation of Vision.

emies to health and happiness that civilized human beings know. Many a suicide is directly traceable to the nervous depression and suffering induced by eye-strain.

In addition to these effects upon the entire system, eye-strain is believed by many specialists to be the inducing cause of many actual diseases of the eyes.

It is, therefore, very necessary to know how eye-strain is caused. There are almost innumerable causes. Some of them are unavoidable, but others—in fact the majority of them—are absolutely avoidable.

The most common unavoidable causes are hereditary malformation of the eyeball and inelasticity of the lens due to advancing years. So far as congenital defects are concerned, no one is born with eyes that are absolutely perfect, though, of course, the degrees of defect vary greatly with different per-

The Conservation of Vision.

sons. It is perhaps safe to say that one-fourth to one-half of the people in the civilized world are born with eyes so imperfect as to cause them to suffer somewhat from eye-strain, more likely than not, in ways unknown to themselves.

Old sight begins at about forty years of age. The focusing apparatus becoming slightly hardened is less adjustable, and so prevents far-sighted eyes from focusing for near vision.

However, none but the more marked visual defects would ever trouble people who wear proper glasses if they should take precautions against the avoidable causes of eye-strain.

For instance, the bad conditions under which people use their eyes are for the most part avoidable. If working by daylight, one should sit as near as possible to a window and allow the light to fall over the

The Conservation of Vision.

left shoulder. It is, of course, bad to have the light dimmed by the shadow of other buildings, or to have the light too bright, or shining directly from any source into the eyes while working. Never work by fading daylight.

If artificial light is employed, very special precautions are necessary to insure the eyes against damage. So important is this subject that it is treated in a separate section.

Aside from care in the way light is used, there are a number of other precautions to observe in the use of the eyes.

Of prime importance are the size and character of print, the length of line, the distance between the lines, and the quality of the surface of the paper.

The type should never be fancy, and should have few "hair lines," as the fine lines are called. The paper should never be so thin as to

• • *The Conservation of Vision.*

permit the lines on the other side of the page to show through. The surface of the paper should never be shiny. The reflected high lights are hard upon the eyes.

If close work must extend over long periods of time, one should glance away from it occasionally and allow the eyes to focus on some distant object, or close the eyes for a few moments. Indeed it is a good practice to close the eyes for a few seconds at the end of every fifteen minutes of work. German type is, of course, especially trying upon the eyes, and particular precautions should be exercised in reading it. At the end of an hour's work, it is well to get up and move about for a few moments before resuming work. At least an hour should be spent in the open air every day, to rest the eyes with distant vision.

Reading, writing, or close eye-work of any kind should be done at

The Conservation of Vision.

about fourteen inches from the eyes.

Reading should never be done while lying down; when one's book is jarred by the motion of a train or boat; before breakfast; or when weakened by illness, especially fevers, or in the case of women after childbirth.

It seems curious that it should be necessary to emphasize the fact that the eyes are physiologically related to the entire organism, yet people tend to regard them as if they were independent. If the close relation between the eyes and the rest of the body is remembered, it will be clear that they never should be used when one is in a generally run down or fatigued condition; when one has indigestion, or a cold, or is convalescing from an illness. Indeed, even the effects of an overheated or poorly ventilated room are injurious to the eyesight, as is also the

The Conservation of Vision.

lowered physical tone which is produced by wet shoes, tight clothing, lack of exercise, poor food, or not enough food. It is when eyes that have always seemed perfect are used under such conditions as these that latent defects begin to cause discomfort, and soon, under still greater aggravation, become serious causes of eye-strain.

The most important questions, however, are: "How can eye-strain be prevented?" and "If it exists, how can it be corrected?" If a person is endowed with fair eyesight to begin with, and a little common sense, it is simple enough to prevent eye-strain. The means are, in general, the acquiring of fixed habits in directions such as have been suggested above, and by observing the points mentioned elsewhere in this pamphlet upon the subject of artificial lighting. The most essential thing is that you realize freshly the preciousness

The Conservation of Vision.

of such eyesight as you have, and become truly and firmly convinced that greater care and thought should enter into your habits of reading, writing and close work.

Fortunately eye-strain, even the more severe cases, can be fairly easily remedied by having a good eye specialist examine and fit your eyes with glasses. Great care should be exercised in choosing your oculist, and equally great precautions should be taken that the optician who fills out your prescription does his work well. Avoid five and ten cent store glasses, or glasses sold by pedlers. Both want to sell glasses rather than fit eyes.

Where one or both eyes turn out, or in, as in cross-eyes or in wall-eyes, there is quite frequently a difference in the refraction of the two eyes, and this should be corrected. Physicians vary as to the urgency of operating in cases of

The Conservation of Vision.

this sort, but it is safe to say that unless one has engaged an exceptionally able expert, it is well to be very conservative about having any muscle cut.

One Final Point: You very often hear the boast, "My eyes are perfectly strong." Don't make that boast until a good oculist says that you may. For, remember, slight eye defects may not—indeed, seldom do—register their *effects* in the eye itself. They draw upon some other part of the system, and many a slight disorder, whose cause you have been at a loss to find, may be due to the presence of unsuspected eye-strain.

Eye Diseases.

The subject of eye diseases is such an extensive and technical one that it will be impossible to more than touch upon a very few of the most common diseases, especially

The Conservation of Vision.

those that are contagious, and hence preventable.

Gonorrheal Ophthalmia. This is the most dangerous eye disease known. The pus produced by gonorrhea is highly destructive to the tissues of the eye whenever it comes in contact with them. The germs multiplying rapidly, in a few hours eat into the cornea, or the covering of the colored part of the eye, and form ulcers whose scars render it opaque, like ground glass. One or both eyes may be damaged, or entirely lost, in this manner.

This infection may be carried to the eyes at any time by touching them with the hands or gloves, or by contact with towels or bed linen that have been soiled with the pus. But the disease is most commonly caught by babies at the time of birth, either directly from the mother or from being handled or touched. So frequently does this

The Conservation of Vision.

infection occur in babies that it is commonly called "babies' sore eyes."

Careful examination of and attention to the mother by a competent physician, before the birth of the child, renders the disease less likely to occur. Many physicians, as a uniform practice, apply a few drops of 1 per cent. nitrate of silver solution to the eyes of the child at birth. The solution is harmless, and is almost absolutely sure to kill any germs that may be there. However, even if there is neglect, and the disease gets a foothold, if taken before very far advanced it can be cured in child or adult by careful medical treatment, commonly with 1 per cent. nitrate of silver solution. Whether a prophylactic has been used or not, if the eyes of a newborn infant show discharge any time within several days of birth, a physician should be immediately called.

The Conservation of Vision.

Trachoma. Trachoma, or granular eyelids, or "red sore eyes," is a contagious disease, manifested by a peculiar granular appearance upon the inner surface of the eyelids. Its progress is far slower and less severe than gonorrheal infection.

This disease in time causes disturbances of vision and deformity of the eyelids. The infection is carried by direct contact only. Hence towels, soap, linen, swimming baths, door-knobs, hands and gloves may be the medium of carrying the disease to the eyes. In general, the disease is only common to those who are forced to live in dirty, ill-kept homes.

Trachoma should be treated as soon as it is discovered. Some physicians prefer operation to the medical treatment.

Phlyctenular Ulcers of the Cornea. Phlyctenular keratitis is a child's disease, and is marked by

The Conservation of Vision.

dread of light, discharge of tears, and the presence of little gray spots or blisters on the eye. Improper food—too little, too much, or of improper quality—is one of the exciting causes of the disease.

The cure is therefore brought about by sufficient food of good, wholesome quality and proper glasses. Pie, cake, candy, etc., are forbidden. In addition, the care of a physician is necessary.

Pink Eye. Pink eye is marked by red eyes with a discharge of matter. It is exceedingly contagious and can spread through a family or a school as rapidly as ordinary colds do. Hence children who have contracted pink eye should be rigidly isolated from other children until they have recovered.

Cold applications and proper remedies are required.

Pink eye is annoying and handicaps one temporarily. It should

The Conservation of Vision.

be carefully watched, and the eyes should not be used while affected. The disease, however, is not dangerous if one is careful. Here, again, there may be an initial need for glasses.

Cataract. Cataract is one of the commonest causes of serious impairment of vision and blindness. It consists of a clouding of the crystalline lens of the eye, affects the sight, and may cause blindness. Cataract occurs from a number of causes. It may grow slowly, from no apparent reason. It may be caused by any one of a number of diseases, or it can be produced by a blow upon the eye. Cataracts can usually be operated upon by a surgeon in such a way as to restore almost normal sight.

Eye Accidents.

By all means the commonest form of eye accident is that very

The Conservation of Vision.

usual occurrence which we call "getting something into the eye." The "something" may be a grain of dust, a cinder, or stray particles of matter of any kind. Upon occasions of this sort there is a right way to go about removing the object from the eye. First get the eye in a good light, then examine it in the following manner: Ask the patient to look down. Then, taking hold of the eyelashes with the thumb and forefinger of the left hand, pull the eyelid downwards and slightly away from the eyeball. Then roll back the eyelid by pressing it midway between the eyelashes and eyebrow with the small end of a penholder. You can then search for the particle by watching the bright reflection on the eye for any irregularity, at the same time having the patient look about in various directions. When the cause of the trouble is located, remove it by

The Conservation of Vision.

means of a toothpick about the end of which absorbent cotton has been twirled. If you cannot provide this, the corner of a clean handkerchief will do. Do not twist the handkerchief to a point with soiled fingers, and by no means moisten it with the tongue; contagion may be carried thus. Indeed the principal danger from the foreign particle itself is that it may carry contagion.

Ordinary black eye is caused by the rupture of blood-vessels. Home treatment in simple cases consists of cold applications for one hour, followed by hot applications until the congestion about the eye is absorbed.

All the more serious eye accidents—even the cases where small particles cause real difficulty—should be handled by physicians.

Special warning, however, should be added to that which will be given by the physician, in re-

The Conservation of Vision.

gard to the dangers of sympathetic inflammation. When one eye has been blinded, it often occurs that the good eye loses its sight as a result of inflammation induced by the presence of the blind eye. This may follow in a week or in twenty years. Hence the well eye should be watched with great care, and at the first sign of any redness or pain an oculist should be consulted.

Wood Alcohol and Tobacco.

There is still another class of disasters to the eye deserving of brief mention. These are such as are caused by poisonous foreign substances getting into the system. For instance, if wood alcohol is taken internally, by mistake or through ignorance, it is terribly destructive to vision. One of the commonest ways in which wood alcohol poisoning occurs is by the drinking of adulterated whiskey.

The Conservation of Vision.

Extracts of ginger, lemon or vanilla, or perfumes, frequently contain wood alcohol, which leads occasionally to disasters in prohibition states. Even the fumes of wood alcohol are dangerous, inasmuch as men have been known to be blinded as a result of being confined in large vats during the process of varnishing them with shellac which contained wood alcohol.

Excessive indulgence in tobacco has poisonous effects upon the nerves, and hence may be followed by injury to the optic nerve. Partial and even total blindness has been known to result.

The Effect of Light on the Eyes.

Next to optically defective eyes and incorrect eyeglasses, bad illumination is the most frequent cause of eye-strain. The prevalence of bad illumination is as general as defective eyes, and both are well-

The Conservation of Vision.

nigh universal. Furthermore, the effects of eye-strain produced by bad illumination may produce defects in vision, and always aggravate those already existing, besides producing the various disorders that result from eye-fatigue or eye-strain.

To have the eyes properly tested and fitted with glasses involves more or less expense, and hence affords some excuse for the neglect of this prolific cause of bodily ills and discomfort; but this does not hold in the case of bad illumination, for good illumination costs no more, and in the majority of cases considerably less. The use of bad illumination can therefore be charged to nothing but want of knowledge of the subject. But for such ignorance there are some extenuating circumstances. The subject is one which has only recently been given careful scientific attention, and the knowledge of what is

The Conservation of Vision.

good and bad illumination, and of how to obtain that which is good, has by no means been generally disseminated. The subject, however, is neither difficult nor complicated, and the observance of a few plain rules will obviate at least all of the more serious faults.

Daylight Illumination.

Daylight has always been accepted as the standard of perfect illumination, and this is true for all general purposes, although there are some exceptional cases in which artificial light is superior. The one quality in which daylight excels is its perfect diffusion. Direct sunlight should never be used for any kind of close eye-work, and windows which receive direct sunlight should be equipped with light buff or green Holland shades.

Ceilings should be kept white, and side walls either white, light

The Conservation of Vision.

buff or light olive green, according to conditions. White should be used where the supply of daylight is limited, as in the case of many factories and workshops, especially in the larger cities; light buff or cream color is preferable where there is an abundance of north light and a considerable amount of blank wall, while green or deep buff is preferable for rooms with large window space receiving direct sunlight.

The daylight illumination of rooms having windows only on one side or end can be greatly improved by the use of prismatic glass in the upper half of the window. By this means it is possible to illuminate a room having a length at least twice its width, with windows only at one end, with practical uniformity.

Flat skylights are to be avoided as they give the same effect as

The Conservation of Vision.

working under the open sky. The most satisfactory of all methods of daylight illumination is the so-called "saw-tooth construction"; but this of course is only available in one-story structures. The eyes should never be obliged to face a window having the open sky in view. This should be observed in the placing of machinery and benches in factories.

Artificial Illumination.

The first thing is to discharge the mind of all preconceived notions as to this or that light being "hard on the eyes." All light sources in common use are capable of giving an illumination that is perfectly agreeable to the eyes; it is the way in which the lights are used that makes them hard on the eyes. Thus, with the proper appliances it would be impossible to tell whether a room were lighted

The Conservation of Vision.

with oil lamps, gas or electricity. Many people still use oil lamps with the idea that their light is easier on the eyes, the notion still being common that electric light is hard on the eyes. The light of the kerosene lamp is easy on the eyes because such lamps are always placed on tables, and nearly always covered with shades which completely hide the flame; and even if the flame is seen, it is so much less bright than the electric light that it is comparatively harmless. But use an electric lamp in the same way that an oil lamp is used, that is, supply it with the proper shade to protect the eyes, and diffuse the light, and the illumination produced is not only just as easy on the eyes, but cannot be distinguished from that of an oil lamp.

The same conditions apply to gas. Thus, the general notion in regard to gas is taken from the old-fashioned flame jet, which

The Conservation of Vision.

flickers and blows and gives a wavering, unsatisfactory illumination. The modern mantle burner, however, when fitted with the proper shade, gives an illumination which is absolutely steady and of a quality which cannot be distinguished from the best electric or oil light.

If gas is used for illumination the flame burner should be entirely discarded except in the few places where a light is only seldom required. Good mantle burners consume but half the gas of an ordinary jet and give from four to six times the amount of light. The mantle burner, however, is entirely too brilliant to be used without a shade or diffusing globe. The test for the proper equipment of either a gas or electric lamp is to look at it from every position in which you would be likely to sit or stand, and see if any part of the mantle or filament is in sight; if so, it should be covered in some way.

The Conservation of Vision.

Globes and Shades.

The various devices for use in connection with lamps may be roughly divided into globes and shades. The former include those which the light passes through, and the latter, those which are intended to reflect the light.

The purpose of globes is to diffuse and soften the light, and thus prevent glare. A globe should entirely hide the luminous surface and should show no brilliant spots of light. Those made of some form of white glass most completely diffuse the light and are, therefore, most agreeable to the eyes. Globes of a light yellow or green tint still further soften the light. Other colors are objectionable, blue giving a cold and ineffective illumination, while red is irritating to the nerves.

Shades of translucent material are generally preferable, those of

The Conservation of Vision.

so-called green and white porcelain being very satisfactory, as are also those of heavy white glass. Prismatic glass shades should either be of the satin-finished type or should be covered on the outside with thin silk. When a shade is used with an electric lamp the lower portion of the bulb should be frosted, and when used with a mantle burner an eye-cup, or "bobesche," should be used. Bare gas or electric lamps should never be tolerated in any case.

Lighting Fixtures.

Wall brackets are generally a poor method of lighting a room; they produce cross lights, and shine more or less directly into the eyes. They are admissible for general illumination in rooms where no reading or close eye-work is to be done, provided they are well shaded or screened. A single bracket can be

The Conservation of Vision.

made to give an excellent reading light by using a good reflector, and sitting with the back to the light. A single tungsten lamp or mantle burner will thus give a light for several people.

The central chandelier is often no more satisfactory than brackets. It is very common to find such chandeliers supplied with gas jets in the form of imitation candles, the flame consequently having no globe or shade, and electric lamps in a vertical position, sometimes with no shade at all, and frequently with some fancy shade or globe which shows bright spots of light and cuts off the rays underneath where one would naturally sit to read or work. In other cases the electric lamps are turned out at an angle and fitted with open globes which expose the bare filament of the lamp. In any of these cases the resulting illumination is exceedingly hard on the eyes.

The Conservation of Vision.

Where the ceiling is white, as is now generally the case, an exceedingly restful effect can be obtained by indirect lighting. This is accomplished by using an opaque reflector which will throw the light on the ceiling, from which it is diffused throughout the room. This can be very easily accomplished on chandeliers in which the electric lamps are in an upright position by simply using such reflectors in the space of the ordinary globes. Small mantle gas burners which take the same size shade-holder as an electric lamp can be obtained, and by using these in the place of the ordinary gas jet the same method can be carried out with gas. Fixtures especially designed for indirect lighting can be had in many beautiful patterns. The fixture known as the "dome," when properly used, gives an excellent light for reading or for the dining room. The

The Conservation of Vision.

height of the fixture and position of the lamp should be such that the light source cannot be seen. Electric lamps should be frosted to prevent streaks of light. If gas is used a single inverted burner is best.

Light Sources.

Within the past few years a new type of electric lamp has come into use, known as the Tungsten, and also the "Mazda." These lamps are more economical than the old types, giving nearly three times the amount of light for the same amount of electric current. The lamps are, however, somewhat more expensive than the ordinary bulb, and are made only in the larger sizes. They are also far more brilliant, and consequently greater care should be taken in diffusing their light.

The latest form of mantle gas

The Conservation of Vision.

burner is known as the "inverted," since the mantle is suspended below the flame. Such lamps are the most economical of all in the use of gas, and require the least frequent renewing of the mantles. The light is very brilliant, however, and should always be covered with a good diffusing globe.

General Directions.

In reading or writing the light should never come from squarely in front, since this will produce a shine on the surface of the paper which not only irritates the eyes but blurs the vision. This is one of the worst faults in desk lighting. A desk lamp should never be placed in the middle of the desk, but well over to the left side, or right side for left-handed people.

In reading always sit with the back towards the light or table. Writing or reading with the book

The Conservation of Vision.

on the table necessitates bending forward the head and chest, which seriously interferes with the proper action of the lungs and heart, which in the case of children may result in permanent deformity. Writing desks should have the top slanting at an angle of thirty degrees, which brings the surface perpendicular to the axis of vision.

It is a common mistake to suppose that the brighter the light the better it is for fine eye-work. The amount, or intensity, of illumination must be varied according to the color of the objects seen. For reading or writing on white paper, or sewing on white goods, a comparatively small amount of light is required, and too much light may produce a dazzling effect upon the surface. If, on the other hand, work is done on dark material, such as sewing on dark-colored cloth, from three to five times as much light may be required.

The Conservation of Vision.

Bare light sources in the line of vision are absolutely bad and to be avoided, whether in the home, school, public hall, factory or office. They dazzle the eyes, produce eye-strain and prevent clear vision, and are therefore both harmful and uneconomical.

Mirrors and polished surfaces should be avoided absolutely in nurseries and rooms in which children or others habitually use their eyes for close work, such as writing, reading or sewing. Light reflected from a polished table is even more annoying than the direct light since it comes from the direction in which the eye is unaccustomed to bright lights. The familiar snow-blindness is an exaggerated case of this effect.

Lamps of any kind should not be too near the eyes, since all light sources give off a considerable quantity of heat which is very irritating. Anyone who has looked

The Conservation of Vision.

at a fire in a grate will understand the discomfort to the eyes from radiated heat.

Industrial Lighting.

The use of bad lighting for industrial purposes is an outrage on those who work under it, and the cause of serious losses to the manufacturer by reducing the quality and quantity of work which the operative turns out. The cost of good artificial light, even if used during the entire working hours, will not represent more than half of one per cent. of the workmen's wages. The question of cost of the light is wholly inconsiderable as compared with the efficiency of the workmen.

This especially applies to offices, and industries employing female labor, for the double reason that such labor commonly requires much careful vision, and the female

The Conservation of Vision.

constitution is more susceptible to nervous strains of any kind.

Great improvements in the production and use of artificial light have been made within the past ten years, and it is now a proven fact that by the selection of the proper light sources and accessories, and their correct placing with reference to those using the light, it is possible to produce conditions of illumination which will enable the eyes to be used with the same degree of efficiency and comfort as by natural light.

Where illumination is to be furnished to a considerable number of people, as in schools, offices, factories, public halls, etc., the services of a competent illuminating engineer should be secured. The directions given for the lighting of the home can generally be carried out by the householder, and if assistance is desired the local lighting companies can now be de-

The Conservation of Vision.

pended upon to give safe and sound advice.

Conserving Eyesight.

The American Association for the Conservation of Vision represents an organized effort to prevent blindness and all lesser impairments of eyesight.

The need for such an effort is found in the fact that by far the largest majority of all cases of blindness arise from preventable causes; that defective vision is both a result and a cause of eye-strain, which in turn is one of the most common and prolific causes of numerous physical and mental ills; and that defective vision is both preventable and curable.

The one needful and efficient remedy for these existing conditions is public education.

The purpose of this Association is:

The Conservation of Vision.

First, to collect and standardize existing information on all subjects pertaining to the use and care of the eyes.

Second, to secure the investigation of subjects on which present knowledge is incomplete or contradictory.

Third, to promulgate knowledge relating to the conservation of vision.

For the purpose of carrying out these objects in the most thorough and effective manner the work of the Association has been divided into six different departments, as follows: Department of Diseases and Defects of the Eye; Educational Department; Industrial Department; Department of Statistics and Information; Department of Publicity; and Department of Legislation.

Each Department is conducted by a Director, with a staff of five or more Associates, and such spe-

The Conservation of Vision.

cial assistants or committees as may be expedient. All of these departments work under the general direction of the Board of Managers and the co-operation of the General Secretary. All existing associations and committees engaged in similar or collateral lines of work are brought into active participation through representation in the various Departments.

Membership in the Association is open to everyone interested, either for themselves or for the good of others, in the objects set forth, and is secured by making formal application to the Secretary, and paying a fee of one dollar for regular membership or five dollars for charter membership. Charter members are those who join before the first annual Convention and pay the larger fee as a contribution toward the founding of the Association. The first annual Convention will be held at

The Conservation of Vision.

some time prior to June first, 1912.

The Association earnestly invites the assistance and co-operation of all who are interested in the various phases of the work of conserving eyesight. In return for such co-operation it offers every assistance in its power, whether for the personal good of the individual member or the work of extending the benefits to others.

The Association is neither charitable nor philanthropic in spirit, but strictly humanitarian, believing that a sound mind in a sound body is the birthright of all, and that to insure every individual coming into his natural inheritance is but an act of common justice.

The discovery of new truths may be reserved for the few, but the benefits arising from their use belong to the many. A large part of the knowledge necessary to prevent blindness and impairment of vision, with all the misery which

The Conservation of Vision.

they entail, has already been discovered. The great necessity now is to make this knowlege generally available. Herein lies the greater work of this Association.



